

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A process for preparing a porous wiring interlayer insulating film having very low dielectric constant for a semiconductor comprising the steps of:

a) preparing a mixed complex of matrix resin and pore-forming ~~organic molecules~~ material, the matrix resin is selected from the group consisting essentially of:

organosilane of Chemical Formula 1: $R^1_m R^2_n SiX_{4-m-n}$ (where each of R^1 and R^2 which may be the same or different, is a non-hydrolysable group selected from hydrogen, alkyl, fluorine-containing alkyl or aryl group; X is a hydrolysable group selected from halide, alkoxy or acyloxy; and m and n are integers of from 0 to 3 satisfying $0 \leq m+n \leq 3$) or a partially hydrolyzed condensate thereof;

organic bridged silane of Chemical Formula 2: $R^3_p Y_{3-p} Si-M-SiR^4_q Z_{3-q}$ (where each of R^3 and R^4 which may be the same or different, is a non-hydrolysable group selected from hydrogen, alkyl, fluorine-containing alkyl, alkenyl or aryl; each of Y and Z which may be the same or different, is a hydrolysable group selected from halide, alkoxy or acyloxy; M is alkylene or arylene group; and p and q are integers of from 0 to 2) or a cyclic oligomer with organic bridge unit (Si-M-Si) or a partially hydrolyzed condensate thereof; and

a mixture thereof; and

the pore-forming material containing an organic part having one or more thermally decomposable organic linkage groups, and at least one silyl functional group at the terminal of the pore-forming material so that the pore-forming material can be connected by covalent bonding with the matrix resin;

b) coating the mixed complex on a substrate; and

c) heating the mixed complex to remove the organic ~~molecules~~ part of the pore-forming material, thereby forming pores inside the complex.

2. (Canceled)

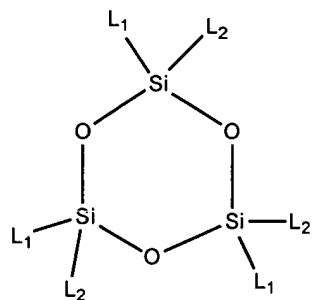
3. (Currently amended) The process according to claim[[2]] 1, wherein in the Chemical Formula 1, R^1 and R^2 are independently hydrogen, alkyl or phenyl and X is an alkoxy group.

4. (Currently amended) The process according to claim [[2]] 1, wherein the organosilane is selected from the group consisting of tetraalkoxysilane, monoalkyltrialkoxysilane, dialkyldialkoxysilane, ~~trialkylmonoalkoxysilane~~ trialkylmonoalkoxysilane, trialkoxysilane, monoalkyldialkoxysilane, and a mixture thereof.

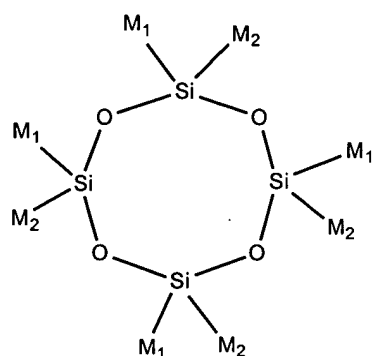
5. (Currently amended) The process according to claim [[2]] 1, wherein the organic bridged silane is synthesized by hydrosilylation reaction between a silane precursor containing a Si-H with a silane monomer containing aliphatic unsaturated carbon ($-\text{CH}=\text{CH}_2-$) in the presence of a catalyst.

6. (Currently amended) The process according to claim [[2]] 1, wherein the cyclic oligomer with organic bridged unit is synthesized by Grignard reaction of alkylhalide containing silane precursor.

7. (Currently amended). The process according to claim [[2]] 1, wherein the cyclic oligomer with organic bridge unit (Si-M-Si) is synthesized by [[the]] hydrosilylation reaction of a silane precursor containing a Si-H with an oligomer of ring structure (I) and/or (II):



(I)



(II)

wherein L₁ is alkenyl, L₂ is hydrogen, alkyl or aryl, M₁ is alkenyl, and M₂ is hydrogen, alkyl or aryl.

8. (Canceled)

9. (Currently amended) The process according to claim [[8]] 1, wherein the organic part of the pore-forming material contains organic linkage groups that can be decomposed at 200 to 500°C.

10. (Currently amended) The process according to claim 1, wherein the step a) comprises

partially hydrolyzing and condensing the matrix resin in an organic solvent after ~~the addition of~~ adding water and catalyst; and adding the pore-forming material to partially hydrolyzed condensate of the matrix resin; or

partially hydrolyzing and condensing the mixture of the matrix resin and pore-forming material in an organic solvent after ~~the addition of~~ adding water and catalyst.

11. (Original) The process according to claim 10, wherein the molecular weight of the partially hydrolyzed condensate product of the matrix resin or a mixture of the matrix resin and the pore-forming material is 500 to 1,000,000 as a weight average molecular weight.

12. (Canceled)

13. (Canceled)

14. (Original) The process according to claim 1, wherein the step c) comprises: heating the mixed complex to 150 to 350°C to effect curing without significant thermolysis; and

further heating the cured complex to 350 to 600°C to effect thermolysis of the organic molecule part of the pore-forming material.

15. (Currently amended) The process according to claim 1, wherein the step c) comprises heating the mixed complex to 350°C up to the lesser of decomposition temperature of the matrix resin to simultaneously effect ~~[[the]]~~ curing of the complex and thermolysis of the organic molecule part of the pore-forming material.

16. (New) The process according to claim 1, wherein the thermally decomposable organic linkage groups are selected from ether group, ester group, amide group,

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carbonate group, carbamate group, anhydride group, amine group, enamine group
containing, imine, azo group, thio-ether group, sulfone, sulfoxide group, isocyanate
group, isocyanurate group, triazine group, acid group, and epoxy group.